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REMARKS

Favorable reconsideration of this application is respectfully requested in view of the above amendments and following remarks. Claims 1 and 14-16 are amended. Claims 17 and 18 are canceled without prejudice or disclaimer. No new matter has been added. Claims 1-16 and 19 are pending. Applicants further note that the initialed Form 1449 dated February 5, 2004 did not confirm that the literature references were considered. Applicants respectfully request that the Examiner return a re-initialed Form 1449 to confirm that of all the references were considered.

Turning to the substance of the Office Action, the priority claim is referred to on pages 2-3. Applicants respectfully submit that this application does not claim priority to an earlier US filing, and that this application claims priority to an earlier filed Japanese filing, which was properly identified in the Application Data Sheet at the time this application was filed. Applicants respectfully submit that the priority claim is proper.

The drawings are objected to for informalities. The rejection contends that reference numerals of Figures 2 and 3 are not shown in the drawings. A Replacement Sheet including Figure 2 and a Replacement Sheet including Figure 3 is attached herewith. The Replacement Sheets reflect corrections to Figures 2 and 3 to show the missing reference numerals. Applicants respectfully submit that the Figures are proper.

Withdrawal of the objection is respectfully requested.

Claim 16 is objected to for informalities. The rejection contends that claim 16 depends upon itself and is improper. Claim 16 is now amended to depend upon claim 14. Applicants respectfully submit that claim 16 is in proper form.

Withdrawal of the objection is respectfully requested.

Claim 16 is rejected under 35 U.S.C. 112, second paragraph as being indefinite.

As noted, claim 16 has been amended to depend upon claim 14. Applicants respectfully submit that claim 16 is definite, and that the rejection is no longer applicable.

Withdrawal of the rejection is respectfully requested.

Claims 1, 3-15, and 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Gyoten et al. (US 6746793) and under 35 U.S.C. 102(b) as being anticipated by Gyoten et al. (WO 99/66578). Applicants respectfully traverse this rejection.

Claim 1 is a fuel cell that requires, among other features, a catalyst layer comprising a mixture of catalyst particles and other particles. An ion-conducting functional group serving as an electrolyte is chemically bonded to a surface of the other particles.

Applicants respectfully note that the PCT publication appears to correspond with the disclosure of the US case, and Applicants submit the following comments apply to both the PCT and US references. Gyoten et al. does not teach or suggest the features required by claim 1. The reference generally is directed to a polymer electrolyte fuel cell, and discloses hydrogen ion diffusion layer provided on a surface of catalyst particles or the carrier of the catalyst particles. However, Gyoten et al. does not disclose or suggest a catalyst layer with other particles, where an ion-conducting functional group is chemically bonded on a surface of these other particles. To the contrary, the reference employs conventional concepts using catalyst particles and electroconductive particles in separate layers.

In fact, the portions of Gyoten et al. referenced in the Office Action do not disclose or suggest the required ion-conducting functional group chemically bonded on the surface of the other particles. For example, the reference discloses a catalyst layer, a gas diffusion layer, and an electroconductive fine particle layer disposed between the catalyst and gas diffusion layers. However, the reference shows nothing of the layers other than the catalyst layer being treated. (See description of Second Embodiment) Thus, Gyoten et al. does not disclose or suggest an ion-conducting functional group chemically bonded on a surface of other particles. In the Third Embodiment, Gyoten et al. discloses that the hydrogen ion diffusion layer can be formed by chemically bonding a silane compound to the surface of the catalyst particle or a carrier of the catalyst particle. However, such configuration simply shows the hydrogen ion diffusion layer on the catalyst, but does not satisfy an ion-conducting functional group chemically bonded on a surface of other particles, as required by claim 1. Further, the reference discusses using water repellent carbon material with a hydrophobic portion that bonds to the surface of the catalyst. However, such water repellent carbon particles would not satisfy the ion-conducting functional group required by the claimed invention. (See description of Fourth Embodiment.)

Consequently, Gyoten et al. does not disclose or suggest that an ion-conducting functional group is chemically bonded to such other particles. Applicants respectfully submit that claim 1 and its dependent claims are allowable over Gyoten et al. for at least these reasons.

Favorable reconsideration and withdrawal of the rejection are respectfully requested.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gyoten et al. US '793 (above). Applicants respectfully traverse this rejection to the extent it is maintained.

Claim 2 depends upon and further limits claim 1, which was discussed above as being allowable over Gyoten et al. Applicants respectfully submit that claim 2 also is allowable for at least the same reasons as claim 1. Applicants do not concede the correctness of this rejection and reserve the opportunity to argue claim 2 separately at another time if desired.

Favorable reconsideration and withdrawal of the rejection are respectfully requested.

In view of the above amendments and remarks, Applicants believe that the pending claims are in a condition for allowance. Favorable consideration in the form of a Notice of Allowance is respectfully solicited. If any questions arise regarding this communication, the Examiner is invited to contact Applicants' representative listed below.



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Respectfully submitted,

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